NOTE: The document identifier and heading has been changed on this page to reflect that this is a performance specification. There are no other changes to this document. The document identifier on subsequent pages has not been changed, but will be changed the next time this document is revised.

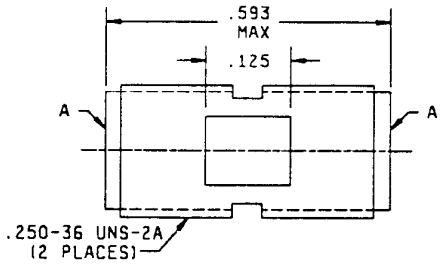
MIL-PRF-55339/31A
28 February 1979
SUPERSEDING
MIL-A-55339/31
11 January 1977

Ⓐ PERFORMANCE SPECIFICATION

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY, IN-LINE, (WITHIN SERIES SMA JACK TO SMA SERIES JACK), CLASS 2

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for procuring the adapter described herein shall consist of this specification and the latest issue of Specification MIL-PRF-55339.



Reference	Series	Contact	Figure
A	SMA	Socket	2

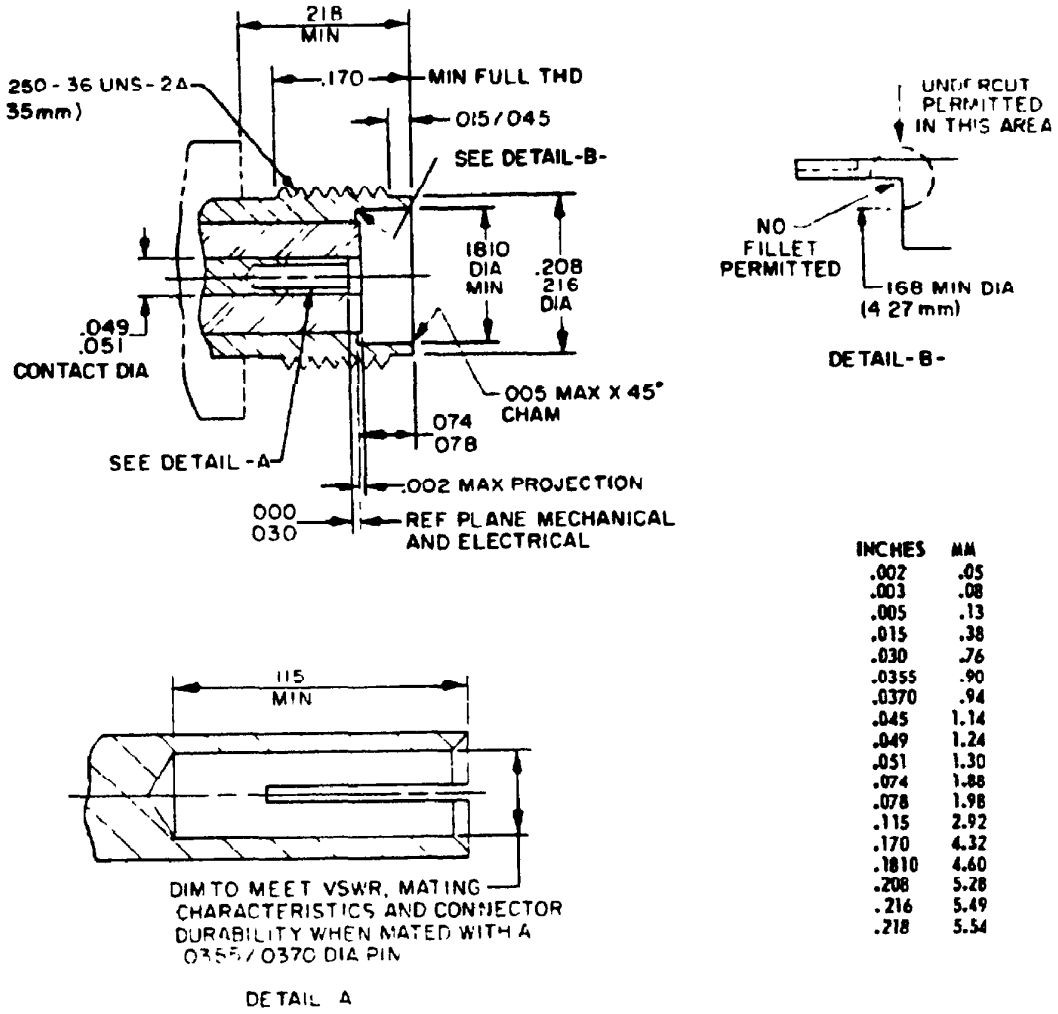
Inches	mm
.125	3.18
.250	6.35
.593	15.06

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1 inch = 25.4 mm.
3. All undimensioned pictorial representations are for reference purposes only.
4. Wrench flats are to accommodate standard wrench opening per H-28, app 10.
5. Ⓐ Unless other wise specified, tolerances are ±.005 (.13mm) on three place decimals and ±.010 (.25mm) on two place decimals.

FIGURE 1. General configuration.

Ⓐ denotes changes

FSC 5935



INCHES	MM
.002	.05
.003	.08
.005	.13
.015	.38
.030	.76
.0355	.90
.0370	.94
.045	1.14
.049	1.24
.051	1.30
.074	1.88
.078	1.98
.115	2.92
.170	4.32
.1810	4.60
.208	5.28
.216	5.49
.218	5.54

NOTES
1. Dimensions are in inches
2. Slitting of inner contact optional
3. Metric equivalents are given for general information only and are based upon 1 inch = 25.4 mm.

FIGURE 2. Mating dimensions for female termination

DESIGN AND CONSTRUCTION·

General configuration See figure 1

Impedance· 50 ohms, nom.

(A) Working voltage: Sea level - 335 Vrms.
70,000 feet - 85 Vrms.

(A) Frequency range 0.5 to 18 GHz.

Temperature range. -65° to +165°C.

PERFORMANCE

Dimensions See figures 1 and 2.

Center contact retention Axial force - 6 lb, min
Torque - Not applicable.

Force to engagement and disengage Longitudinal force - Not applicable.
Torque - 2-in. lb, max.

Coupling proof torque· Not applicable.

Mating characteristics
Center contact (socket):
Oversize test pin dia - .0375 in., min.
Pin finish - 16 microinches
Insertion depth - .030/.045 in., min.
No. of insertions - 3.
Max test pin (insertion force test):
Steel test pin dia - .0370 in., min.
Pin finish - 16 microinches
Insertion depth .050/.075 in., min.
Insertion force - 3 lb, max.
No of insertions - 1.
Min test pin (withdrawal force):
Steel test pin dia - .0355 in., -.0001.
Pin finish - 16 microinches.
Insertion depth .050/.075 in., min.
Withdrawal force - 1 oz, min.
No. of withdrawals - 1

Permeability. <2.0.

Seal:
Pressurized - Not applicable.
Weatherproof - Not applicable.

Insulation resistance: 5,000 megohms, min.

(A) VSWR· 1.10 + .008 F(GHz) max at 0.5 to 18 GHz.

RF leakage (total): 60 dB, min, 2 to 3 GHz.

RF insertion loss. ($.06\sqrt{F\ (GHz)}$ dB max tested at 6 GHz).

Durability 500 cycles minimum at 12 cycles/min maximum. The connector shall meet the mating characteristics and force to engage and disengage.

Dielectric withstanding Test voltage - 1,500 Vrms, min (sea level).

Contact resistance (milliohms, max):

Contact	Initial	After
Center	4.0	6
Outer	2.0	Not applicable

(A) Vibration, high frequency: Interruptions - 1 µs, max. Test condition D.

Shock· Test condition I.

Thermal shock Test condition C

Moisture resistance· 200 megohms, min.

(A) Corona level: Voltage - 250 V, min.
Altitude - 70,000 feet, min.

(A) RF high potential withstanding voltage RF voltage - 670 Vrms, min.
Frequency - 5 MHz, min.

Salt spray (corrosion) Test condition B.

MARKING: As specified in MIL-A-55339.
(A) Part No. M55339/31-30001
M55339/31-40001

Custodians·
Army - CR
Navy - EC
Air Force - 85

Review activities.
Army - AR, MI
Navy - SH, OS
Air Force - 11, 99
DLA - ES

User activities:
Army - AT
Navy - AS, MC, SH
Air Force - 19

Preparing activity:
Army - CR

Agent:
DLA - ES

(Project 5935-3057-13)